nord electro 3

virtual electromechanical

nord electro 3 HP

User Manual
Nord Electro 3

OS Version 3.x

Part No. 50316
Print Edition 3.1

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CAUTION - ATTENTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN
RISQUE DE SHOCK ELECTRIQUE
NE PAS OUVRIR

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED PERSONNEL.

ATTENTION*:POUR EVITER LES RISQUES DE CHOC ELECTRIQUE, NE PAS ENLEVER LE COUVERCLE.*
AUCUN ENTRETIEN DE PIECES INTERIEURES PAR L´USAGER.
CONFIER L´ENTRETIEN AU PERSONNEL QUALIFE.
AVIS*: POUR EVITER LES RISQUES D´INCIDENTE OU D´ELECTROCUTION, N´EXPOSEZ PAS CET ARTICLE A LA PLUIE OU L´HUMIDITET.*

The lightning flash with the arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated voltage within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

Le symbole éclair avec le point de flèche à l´intérieur d´un triangle équilatéral est utilisé pour alerter l´utilisateur de la presence à l´intérieur du coffret de "voltage dangereux" non isolé d´ampleur suffisante pour constituer un risque d´éléctrocution.

The exclamation mark within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

Le point d´exclamation à l´intérieur d´un triangle équilatéral est employé pour alerter l´utilisateur de la présence d´instructions importantes pour le fonctionnement et l´entretien (service) dans le livret d´instructions accompagnant l´appareil.

Instructions pertaining to a risk of fire, electric shock or injury to persons.

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

Warning - When using electric products, basic precautions should always be followed, including the following:

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings.

4) Follow all instructions.

5) Do not use this apparatus near water.

6) Clean only with dry cloth.

7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11) Only use attachments/accessories specified by the manufacturer.

12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13) Unplug this apparatus during lightning storms or when unused for long periods of time.

14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Additional Safety Information

No naked flame sources, such as lighted candles, should be placed on the apparatus;

Il convient de ne pas placer sur l´appareil de sources de flammes nues, telles que des bougies allumées;

Do not use the apparatus in tropical climates.

L´appareil n'est pas destiné á étre utilisé sous un climat tropical.

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

L´appareil ne doit pas étre exposé á des égouttements d´eau ou des éclaboussures et de plus qu´aucun objet rempli de liquide tel que des vases ne doit étre placé sur l´appareil.

The maims plug is used as the disconnect device and shall remain readily operable.

Lorsque la prise du résau d'alimentation est utilisée comme dispositif de déconnexion, ce dispositif doit demeuré aisément accessible.

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1 Introduction

Thank you!

We'd first like to thank you for purchasing the **Nord Electro 3**. Our goal when we developed the Nord Electro instruments was to create the best emulations of traditional electromechanical keyboard instruments on the market, and to make these instruments compact and lightweight. With the Electro 3 we have taken our commitment a step further, by upgrading the organ, the piano and the effects sections and also by introducing the ability to use sampled instruments from the Nord Sample Library in the Nord Electro 3.

The new addition to the series is the Electro 3 HP with a keybed that has a weighted hammer action in a very light-weight package and some additional features.

This allows us to e.g. include some of the fabulous Mellotron sounds in the factory sound bank. Each and every piano and sample in the Nord Electro 3 can be replaced by you, using the free Nord Electro 3 Sound Manager application. New pianos and other sounds are found on the enclosed Nord DVD and on the **www.nordkeyboards.com** web site.

No compromises, just a good selection of outstanding, classic keyboard sounds with true feel, from a natural keyboard response to the authentic sound quality – that is what we have been pursuing during the development. To make a great tool you have to put all the focus on a few things and that is exactly what we tried to achieve. We hope that you will have as much fun owning and using the instrument, as we had developing it.

About this manual

You are probably very eager to start using your new instrument, and we sure don't want to keep you from having fun. We will try to cover all the essential aspects on how to use the Electro 3 in the very first few pages of this manual. After that follows the reference section where all the functions are explained in detail.

The Electro 3 HP, the Electro 61 and the Electro 73 versions share most of the features. The sections in this manual that explains the additional Electro 3 HP features will be indicated with the Logo you see here.

nord electro 3 HP only

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OS and internal memory

The operating system, programs and pianos and samples in Nord Electro 3 are stored in a Flash memory. A Flash memory keeps the data also when the power is turned off. Another big advantage is that you can replace data in the Flash memory at any time. This means that you will be able to download OS upgrades, pianos and samples and programs to your Nord Electro 3 from a computer. The Nord Electro 3 features a USB port for quick and easy download of new piano and/or instrument samples.

Factory presets

The internal sound memory of Nord Electro 3 consists of 128 programs. In addition there is the Live buffer memory, which will continuously store any changes as they are made, and remember these settings after the power is turned off.

All of the 128 factory Programs of Nord Electro 3 can be replaced. To make sure you don't accidentally overwrite Programs you want to keep, it's a good idea to back up your sounds regularly on a computer using the Nord Sound Manager application.

Restoring the factory presets

The factory Programs are available as Nord Sound Manager backup files for download at the Nord web site at www.nordkeyboards.com or on the included Nord DVD.

OS upgrades

The latest OS version for Nord Electro 3 series is available for download at the www.nordkeyboards.com website.

2 Overview

The front panel of the Nord Electro 3 has four main areas, Organ, Piano, Program and Effects. We'll familiarize ourselves briefly with the panel here and describe the functions in detail in the following chapters.

On the left part of the panel is the Master Level knob, the organ model selector and the Rotary Speed section. The Master level controls the entire instruments output level at the two output jacks and the headphone output. This control is not programmable, that particular functionality is instead available in the effects section with the Gain control.

The Organ section is lit and active when the Organ selector in the Program area is activated.

Moving towards the middle of the panel, the Piano section behaves just as the organ. The controls are lit when the Piano selector is active.

The Program section contain the parameters and functions that are used to select and store programs, to set the System, MIDI and Sound functions and to select the instrument to be used with the Organ or Piano selectors. We'll describe the functions in this area in greater detail starting at page 15.

The Effect section contains the functions of the effects. Please refer to page 16 for more information.

The functions and settings of the System, MIDI and Sound menus are conveniently printed to the right on the panel.

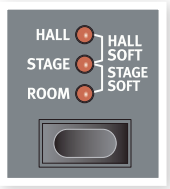
Knobs & buttons

Knobs

The knobs control the continuously variable parameters in the Nord Electro 3.

ℹ *A parameter value can be totally different from the knob's physical position when you load a Program. As soon as you start turning the knob, the value will 'snap' to the knob's physical position.*

Selector buttons



Selector buttons are used to activate one setting in an array. Selector buttons have a set of round or triangular LEDs to indicate the current setting. Press the button several times to cycle through the possible options.

💡 *Holding Shift and pressing a selector button (with the exception of the Type button) will cycle through the settings in a counter clockwise fashion.*

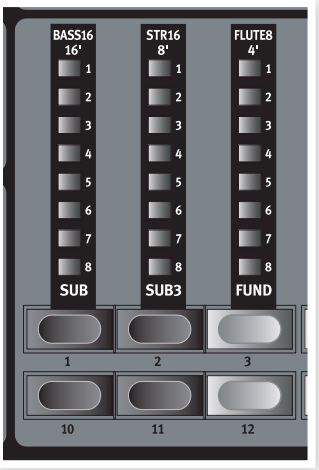
On/Off buttons

On/Off buttons are used for activating a parameter or a group of parameters such as effects.

Shift button

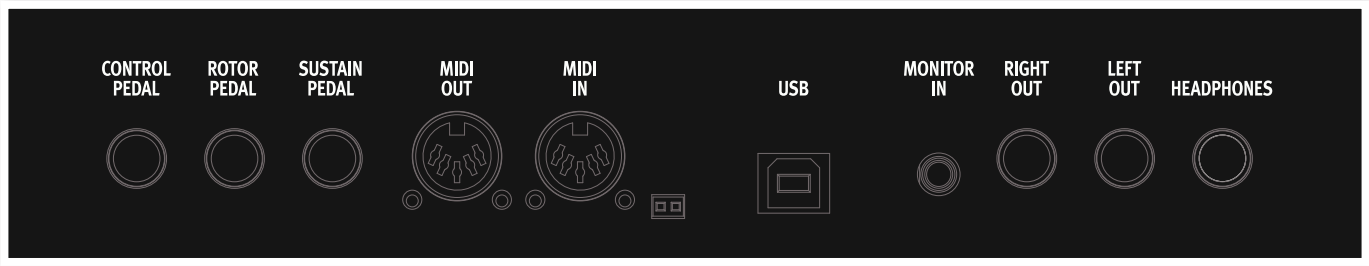
Some buttons have a secondary function, which will be available if you hold down Shift while pressing the button. The name of the secondary function is printed below the button. Shift is also used together with the Up/Down buttons when you want to change a setting in the System, MIDI or Sound menus.

Drawbars



The nine drawbars of Nord Electro 3 are represented by up/down buttons and LED chain graphs instead of ordinary mechanical drawbars. This gives you a big advantage; when you change presets, the correct drawbar settings are shown immediately by the LEDs.

3 Connections



Audio connections

Headphones

This is where you connect a ¼" stereo connector from a pair of headphones.

Left Out and Right Out

The left and right line level outputs from the Nord Electro 3 are unbalanced. Use ¼" connectors to connect the Nord Electro 3 to an amplifier or recording equipment.

The Nord Electro 3 is a stereo instrument, with separate signal paths for the left and right audio channels. To properly experience the Electro 3, use both outputs in a stereo operation.

The System functions allow you to separate the pianos/samples and the organ sounds in the left and right outputs. Read more about this functionality on page 18.

General guide on audio connections:
- Make all the connections before you turn on the power to your amplifier.
- Turn on the power to your amplifier last.
- Turn off the power to your amplifier first.

⚠ *Playing at a high volume level can result in hearing impairments such as permanent hearing loss.*

Monitor In

Use this to connect and monitor a signal from an mp3 or a CD player at the Nord Electro 3's headphone output. This allows you to e.g. rehearse with the Electro 3 to pre-recorded music.

ℹ *Signals connected to this input will not be processed with the Electro 3's effects or appear at the Electro 3's left and right output jacks.*

USB Connection

The USB connection is used for the Nord Electro to communicate with a personal computer in order to update the OS or to add or replace any of the piano and/or sampled sounds. The computer can run the Nord Sound Manager application, or be used to transfer the operating system if the unit needs to be updated.

ℹ *Computers running Microsoft Windows operating systems need a driver for the USB connection to work. The driver can be found on the enclosed Nord DVD, or at the www.nordkeyboards.com website.*

MIDI Connections

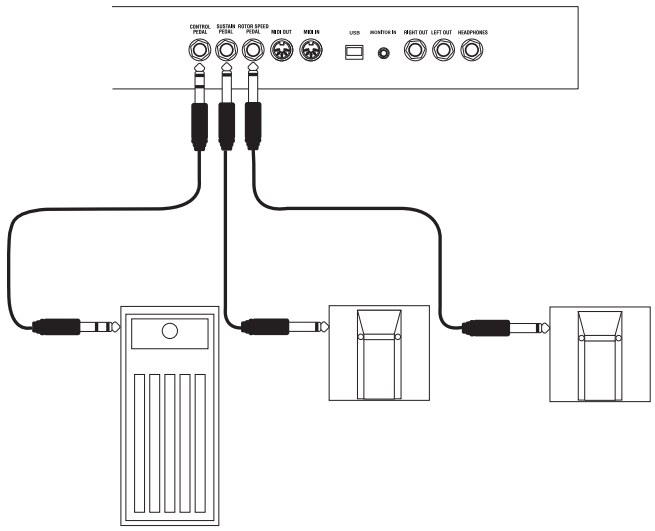
MIDI Out

MIDI connection used for sending keyboard and panel generated MIDI data from the Nord Electro 3 to other equipment such as sound modules or computers.

MIDI In

MIDI connection used to receive MIDI data to the Nord Electro 3 from other equipment such as keyboards or computers.

Pedal Connections



The Nord Electro 3 has three pedal inputs; one for a sustain pedal, one for a pedal to control the rotor speed and one for a control pedal (an expression type pedal), which can be used to control various parameters.

Sustain Pedal

¼" connector for a switch type pedal. When a connected pedal is operated, the notes you play will be sustained.

Rotor Pedal

¼" connector for a switch type pedal. When a connected pedal is operated, the rotary speed will change.

Two types of pedal polarities can be used with these inputs; you select the one that applies to each pedal, in the System menu which is described on page 18.

It is possible to use only one pedal connected to the sustain pedal input to control sustain for piano sounds and rotary speed selection for organ sounds (see "Sustain Pedal Configuration" on page 18 for details on how to configure this).

Control Pedal

¼" stereo connector for a pedal of the potentiometer type (also known as expression pedals). A connected pedal can be used as a swell pedal for the organs, a volume pedal for pianos and samples and also as a controller for two of the effects: the P-wah and the ring modulator (RM).

When connecting an expression pedal to the Control Pedal input, you should use a stereo cable with a Tip-Ring-Sleeve connector. Please note that the pedal must have a stereo output jack. The resistance range of a control pedal should be 10 or 50 kOhm. To simplify setup, the most common pedal models (Roland, Yamaha, Ernie Ball and Fatar) are pre-configured in the Nord Electro 3, and you simply select the type of pedal which you want to use in the System menu. The System Menu is described on page 18.

4 Getting Started

Let's take a few minutes to get familiar with the Electro 3. The user interface is designed to be as intuitive as possible, and to perform as well as you do in a live situation. We hope that you soon will feel confident in using it, and by following this short chapter, we will go through most of the functions.

About the programs

Complete sound settings are stored in the **Program memory** of the Nord Electro 3. This memory area has 128 locations that are numbered 1A, 1B, 2A, 2B, etc up to 64B.

The **Electro 3 HP** organizes the memory in 32 banks with 4 programs each.

Every program can be edited and replaced as you wish. A complete set of the factory programs are available on the Nord DVD that accompanies the unit and on our website.

Select a program

Press the **Up** or **Down** button repeatedly until you've selected the desired program number. The program will be loaded immediately.

Press the **Prog A** or **Prog B** buttons to quickly switch between the program number A or program number B. Press **Shift** and **Up/Down** to scroll continuously in the program bank.

Select a program

nord electro 3 HP only

Use the Up/Down buttons on the Nord Electro 3 HP to select the bank and the program buttons 1 ~4 to select the programs within each bank.

Edit a program

Editing a program is just as easy as grabbing a knob and change a setting, or press a button to select a different setting. The knob's physical position isn't always as the stored setting in the program that is active, but as soon as you start turning a knob, the parameter will snap to the knob's position.

When you have edited a program, a dot will appear in the lower right display corner next to the program number. This will alert you to the fact that the program has been edited but not yet saved. If you select a new program without saving, any edits you have made will be lost and the program will have its original settings the next time you select it.

Storing a program

If you are happy with an edit that you have made, you should probably save or Store the program.

- *There is a Memory Protect function that is set to On when the Electro 3 leaves the Nord Factory. This has to be turned Off in the System Menu before you can save a program.*
- *The setting of the memory protection will be remembered even if the Electro 3 is turned off.*

1. Press **Shift + System** and use the Up/Down buttons to select the **Memory Protect Option** – this is the very first option in the System menu. Set the memory protection to Off by pressing and holding Shift and the Up or Down buttons. Exit the System menu by pressing the Prog A/System button again.
2. Press the **Store** button.

The program number LEDs starts flashing.

3. Select a new location where you want to store the program.

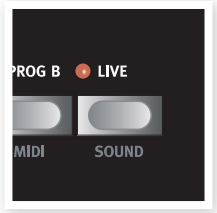
Use the Up/Down buttons and the program buttons to navigate to a new program location if you do not want to overwrite the original program.

4. Press the **Store** button a second time to confirm your choice.

The edited program has now replaced the previous one in the location you specified.

- *To cancel the procedure, press the Shift button before you press Store the second time.*
- *With Memory Protect set to Off, a double tap on the Store button will store a Program in its original location.*

The Live buffer



The special **Live buffer** can be described as a “live program memory”. If you activate the Live button, all changes to the panel settings you make will be continuously saved. If you switch the power off, or select another program, the settings are still stored in the Live memory, so when you power up next time (or return to the Live memory) all settings will be exactly as they were when you left them.

If the Live memory is selected and you decide you wish to store the settings permanently as a program you can do so using the standard methods (see above). You can also store programs into the Live memory location, in which case the program settings will replace the current Live memory settings.

Octave Shift

Press either of the Octave Shift buttons to shift the pitch up or down in whole octaves within the instrument’s note range. Each instrument has a finite note range, read more about this in “Octave Shift” on page 15.

Adding effects

1. Select a program, e.g. number 1A which is a Grand Piano with a hint of reverb.
2. Turn on **Effect 2** (the On LED should be lit) and press repeatedly on the Effect 2 selector.

The effect options are indicated with the selector LEDs and changes in a cyclical, clockwise fashion for each time the selector is pressed.

Some of the effects have three options that indicate the depth of the effect. Flang 1 is the shallowest version, Flang 2 is a more pronounced effect and when both Flang 1 and Flang 2 LEDs are lit, you have selected the most dramatic tremolo effect.

3. Turn the **effect rate** knob.

This changes the rate of the active effect.

4. Hold **Shift** and press repeatedly on the effect selector.

This allows you to reverse through the effect selections.

5. Turn **off** the effect.

If you now continue to press on the effect selector after the effect is turned off, the effect setting will change even though the effect is not active.

- *This method can be used to select a certain effect setting while playing, without affecting the sound until you actually activate the effect.*

Let’s try the wah effect

1. Turn on **Effect 1** and activate the **A-Wa**.

The A-Wa is a dynamic Wah-wah effect. It will affect the sound depending on the volume of the signal.

2. Play a few notes with varying velocity while turning the **Effect 1** knob.

- *The P-Wa is a manual Wah-wah effect that can be controlled manually by turning the knob while playing or by using a control pedal connected to the Control Pedal input on the rear panel.*

Activate an amplifier emulation

1. Press the **Speaker/Comp** button to activate the Amp emulation.

The Speaker/Comp LED will be lit.

2 Press repeatedly on the selector to cycle through the various options.

The knob controls the drive for the three amps and the rotary simulator, and the amount when the compressor is selected.

Selecting a piano or a sample

1 Make sure that the **Piano** instrument selector is active.

2 Press repeatedly on the **Piano Type** selector to cycle through the six types.

3 Select the **Grand** and press the **Model** button.

This allows you to select the various Grand's within this particular type.

4 Press the **Type** selector again until the **Samp Lib** is activated.

Use the Model selector to select one of the samples that are included in the Electro 3 from the factory.

5 Press the **Samp Env** button repeatedly.

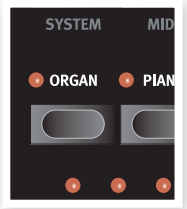
This will cycle through the four options for the sample's attack and velocity settings.

6 Press and hold **Shift** and the **Samp Env** button.

This allows you to select one of the four available release time settings.

ℹ *This button doubles as the Clavinet EQ selector, when the Clavinet type is active.*

Using the Organ



1 Press the **Organ** instrument selector.

This activates the Organ section.

2 Press the **Organ Model** selector repeatedly to cycle through the three organs – the B3, Vox and Farfisa emulations.

The settings for the three organ sounds are made using the digital drawbars. The Farfisa uses these in a switch mode, with only two settings for each.

3 Make a setting with the drawbars and then press the **Preset/Split** button.

This activates the second preset, which allows you to keep two different settings for an organ sound available from the panel at any time. The settings of both Presets 1 and 2 are stored in the Electro 3's program memory.

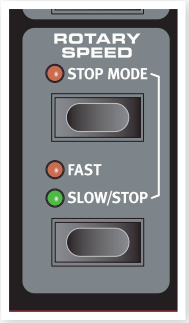
4 Press and hold **Shift** and the **Preset/Split** button.

This activates the organ split mode. The keyboard will be split at C4.

The lower half will use the Preset 1/Lo setting; the upper half will use the Preset 2/Up setting.

💡 *If you press and hold both the Shift and the Preset/Split buttons for a couple of seconds, the Split LED will begin to flash and you can press a key on the keyboard to set a new split point as long as these buttons are held down. The key you press will be the first upper manual key.*

The Rotary effect



The rotary effect adds some great sonic drama to the organs, but can of course be used with any other sound as well. The Electro 3 rotary has three available speeds: **fast**, **slow** and **stop**. Stop does not disengage the effect; it only stops the rotating speakers

1 Make sure that the **Speaker/Comp** effect is activated and select the **Rotary** by pressing the effect selector.

The drive knob now controls the overdrive of the rotary amplifier.

2 Press the **Slow/Stop** button in the **Rotary Speed** section to the left on the panel, to cycle between the **Fast** and **Slow** speeds of the rotary.

The rotors will speed up and slow down, producing a nice swirly effect without the negative side effects that e.g. alcohol intake might induce.

3 Press the **Stop** mode button to activate this one-speed mode.

The Stop Mode LED will be lit.

4 Press repeatedly on the **Slow/Stop** button to cycle between **Fast** and **Stop**.

The rotary will now emulate the functionality of an early, one speed original rotary speaker that had only the fast and the stopped rotary speed options.

💡 *If you connect a foot switch to the rotor pedal input, you can control the rotary speed with this pedal.*

The Delay

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1 Activate the delay/reverb.

2 Hold Shift and press the reverb selector button. The Delay LED lights up.

3 Tap the desired tempo on the Tempo Tap button.

4 You can also set the delay time by holding the Tempo Tap button and adjust the tempo with the Up/Down buttons.

5 Adjust the number of repeats (Dly1, Dly2 etc.) by pressing the selector button repeatedly.

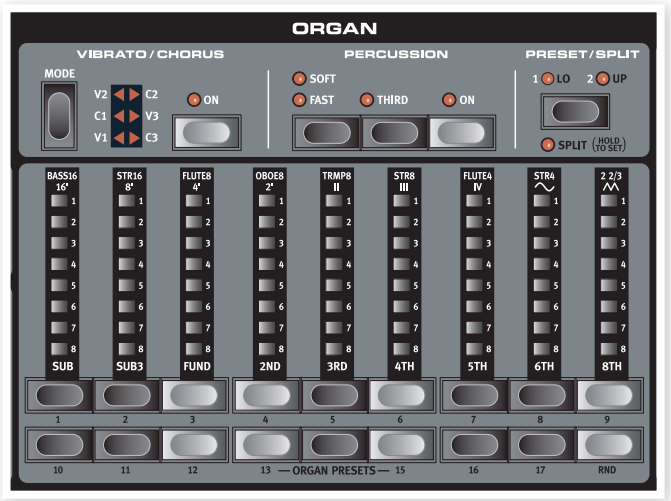
This finishes our little tour; we hope that you now have the initial knowledge on how to operate most of the functions on the panel.

5 Nord Electro 3 Reference

Master level knob

This control sets the **overall output level** of the Electro 3, at the line and the headphone outputs. This is not a programmable control. If you want to program an output level for a particular program, this can be achieved with the Gain control.

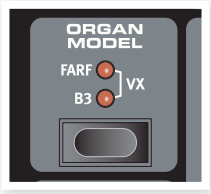
Organ section



The Organ section in the Nord Electro 3 features emulations of three classic organ models; a Hammond B3 (B3 model), a Vox Continental II (Vx model) and a Farfisa Compact DeLuxe (Farf model).

Organ Model button

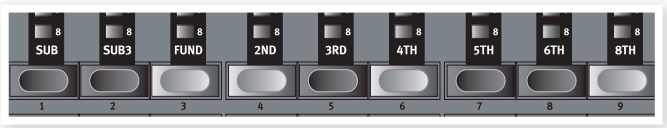
You select which organ model to use, with the **Organ Model button**.



The B3 model

This model is a digital simulation of the classic mechanical tone wheel organ. This simulation utilizes innovative and advanced methods to capture every nuance of the original sound, for example:

- An extremely accurate digital model of the original chorus and vibrato scanner.
- Modeling of the individual random contact bounces for each harmonic.
- Modeling of the unique frequency characteristics of the built-in pre-amplifier which forms the “body” of the sound.
- Simulation of the energy robbing in the tone wheel architecture that creates the typical “compressed” sound.
- Authentic tuning of the tone wheels according to the original design
- Extremely fast keyboard response.
- Full polyphony.



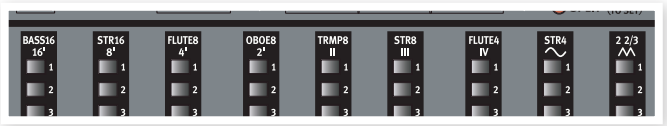
Each drawbar represents a partial with a fixed harmonic interval relating to the played note. Note that the Sub3 drawbar is a 5th above the fundamental harmonic although, in most situations it is perceived as sounding below the fundamental harmonic.

Do not forget to try out the four tonewheel modes that are available in the Sound menu. These will dramatically change the sound of the B3 model from squeaky clean to a battered, old work horse.

The VX model

The original instrument is probably the most famous of all the transistor-based combo organs that emerged in the early 60’s. Transistor technology made it possible to manufacture much more compact and portable organ instruments. Compared to the mighty sound of tonewheel based organs, transistor organs generally sounded reedier and weaker, but this one had a distinctive, timeless sound and is recreated faithfully in the Nord Electro 3.

The labels used for the VX model drawbars are printed on the row directly above the drawbar led’s. For basic drawbar operation, please refer to “The Drawbars” on page 13. The drawbars on the Electro 3’s VX emulation control the level of each available partial, in the same fashion as on a dual manual original Continental. The upper manual uses the 16, 8, 4, II and III registers and the lower manual uses the 8, 4, 2 and IV registers. Each register represents a fixed harmonic interval, or groups of intervals (the II, III and IV) in a relationship to the played note.



The two rightmost drawbars control the sum of all partials in the form of a filtered, soft and dark sounding signal (the sine icon), and an unfiltered signal with a bright and intense sound (the triangular icon).

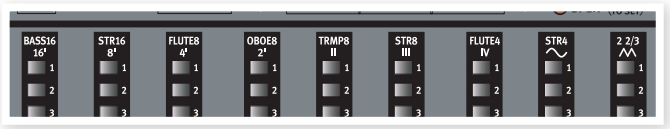
If these drawbars are both fully set to the lowest level, the organ will produce no sound.

The Farf model

This typical “buzzy” sound of this vintage instrument is one of the most distinct and easily recognizable organ sounds ever created, yet it is actually possible to get quite a wide range of sounds out of the instrument.

The labels used for the Farf model drawbars are printed on the upper row above the drawbars. The drawbars act as on/off switches, or “Register selectors” when the Farf model is selected.

The drawbar LEDs 5-8 are lit up for an activated voice, and drawbar LEDs 1-4 are lit up for a deactivated voice. The illustration below shows the registers.



Rotary Speed

The rotary speaker speed is controlled with the rotary speed buttons or with an external pedal connected to the rotor pedal input on the rear panel.

Press the **Slow/Stop** button to change the rotation from Slow to Fast and vice versa.

To stop the rotors, press the **Stop Mode** button to activate the Stop Mode and then the Slow/Stop button (this does not deactivate the Rotary Speaker simulation - it only stops the rotors). When you press the Slow/Stop button again the rotors will accelerate to the **Fast** speed setting. This functionality mimics the behavior of an early, one speed original rotary speaker.

A connected pedal can be set to change the speeds only when it is held down or to function like a switch, changing the speed every time you press it. This functionality is set in the System menu, read more on this on page 18.

ℹ *The actual rotary simulation is activated at the Effects section, with the Speaker/Comp selector.*

Vibrato/Chorus

The Vibrato/Chorus section mimics the behavior of the original organs, which means that these parameters functionality depends on which model is active. Select the desired vibrato or chorus type by repeatedly pressing the **Mode** button. The Vibrato/Chorus section is common for both the upper and lower presets, if the split function is active.

B3 – The original tonewheel organ's vibrato and chorus scanner consists of a tapped delay line in combination with a rotating scanner. For the Vibrato effect, phase shift is applied to the signal. For the Chorus effect, a phase modulated signal is added to the original signal. Three different types of choruses (C1- C3) and three different types of vibratos (V1-V3) are available.

VX - There is only one type of vibrato available for the VX model, which is activated using the ON button in the Vibrato section.

Farf - This model has two basic vibrato modes; "Light" and "Heavy", with two different rates for each mode.

Percussion

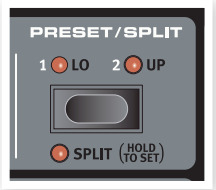
The Percussion effect adds extra attack to the B3 sound by having a single envelope generator controlling either the 2nd or the 3rd harmonic. The envelope "opens up" for a short moment in the beginning of the sound when you press the key(s). The percussion will only affect the upper manual if the Split function is active.

The Percussion is a single-triggered non-legato effect. It is only present when you hit the keys when no other note is sounding. In other words, if you play a note or a chord and then add on more notes without releasing the previously pressed keys, there will be no percussion effect in the new notes. You have to release all keys to be able to play new notes with the percussion effect.

The percussion effect is activated and deactivated by pressing the **On** button. The **Soft/Fast** button toggles between normal or soft percussion levels and fast or slow decay times, providing four available combinations. The **Third** button toggles between using the 2nd or 3rd partial as the source for the percussion effect. The percussion decay times (and levels) can be fine-tuned for Fast and Slow mode individually. Please refer to "Sound Menu" on page 20 for details.

ℹ *With the original instrument, you could not use the percussion effect and 9th drawbar simultaneously. However with the Nord Electro 3 you have a choice. You can use the percussion and 9th drawbar together or chose to mimic the original organ behavior by turning off the 9th drawbar whenever the percussion is activated. Read more on the Perc Drawbar setting in the Sound menu on page 20.*

Preset/Split



Use the **1/Lo** and **2/Up** buttons to store and recall two separate settings for the organ section.

Press the **Shift** and the **Split** button to divide the Nord Electro 3 keyboard into two sections, the **Lower Manual** and **Upper Manual** sections. By default, the split point on the keyboard is between the keys B3 and C4. You can, however, also set the split point manually by holding **Shift** + pressing **Split**, the split LED starts to flash, then while still holding the buttons press the desired key. A set split point is saved as part of the parameters in a program.

Using an additional MIDI keyboard in a dual manual fashion

You can connect an additional MIDI keyboard to the Electro 3 to use the organ in a dual manual fashion, with the external keyboard operating as the lower manual.

1. Connect the external MIDI keyboard's MIDI out to the Electro 3's MIDI in.
2. Set the MIDI channel of the external keyboard to the channel that is set in the MIDI menu, the Lower Channel setting.

The default Lower MIDI channel in the Electro 3 is "2".

3. Select the MIDI Split option in the MIDI Menu and set this to On.

Read more on how to change settings in the MIDI Menu on page 19.

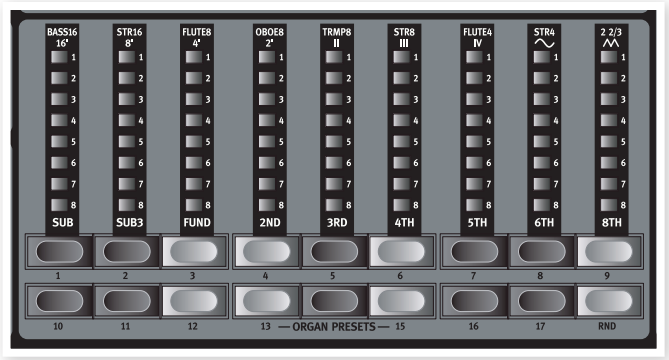
4 On the Electro 3, press and hold Shift and the Split button.

This will activate the organ split mode, but since MIDI Split is set to On, the Electro 3's keyboard will only play the upper part without being split.

5 Press the Preset/Split button to cycle between the 1/Lo and the 2/Up settings.

Adjust the drawbars for the lower, external keyboard when the 1/Lo LED is lit and for the Electro 3's keyboard when the 2/Up LED is lit.

The drawbars

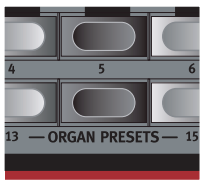


The drawbars of the Nord Electro 3 are represented by buttons and LED graphs. This gives you a big advantage: when you change the program, the correct drawbar settings are recalled immediately and shown by the LEDs.

The drawbars of Nord Electro 3 behave similar to their mechanical counterparts, i.e. with the B3 and VX models you "pull out" and "push in" the drawbars using the Drawbar buttons. The buttons are special in the way that they auto-increment/decrement the drawbar value when held. If you hold a Drawbar button the corresponding drawbar value will continue to change (within its range) until you release the button. The speed of the automatic change can be set in the System menu, read more about this on page 18.

☼ *While holding a Drawbar button, you can press its sibling button to momentarily auto-increment/decrement in the opposite direction.*

Organ Presets



The Drawbar buttons can be used to access 17 different organ presets plus a Random setting (RND) for each of the three organ models. These presets contain the drawbar settings, the vibrato/chorus and the percussion parameters.

Press Shift + the corresponding Drawbar button to select one of these presets. The Random function will generate a new random preset every time you activate it.

Store your own organ preset

Here is how to store your own organ preset:

1 Use the upper drawbar and lower drawbar buttons, and the vibrato/chorus and percussion sections to create the organ setting you want to store.

2 Press and hold Shift and the Store/Store Org. Preset button.

The display will flash "O. pr".

3 Setect a desired location to store by pressing one of the Organ Preset buttons.

The display will show the selected preset number.

4 Confirm your intentions by pressing Store once more.

This procedure may be aborted by pressing any button (except Store or one of the preset buttons) on the panel.

ℹ *Organ presets can be managed using the Nord Sound Manager, read more about this on page 21.*

Piano section

The Piano section of the Nord Electro 3 is divided into six different types; each type can contain several instrument models. You can freely add new piano instruments and samples via USB using the Nord Sound Manager utility (see "Nord Sound Manager" on page 21).

Right out of the box, Nord Electro 3 features a fine collection of carefully selected acoustic and electromechanical pianos, harpsichords and sampled instruments. A lot of effort was put in to ensure that the response and sound of the sampled instruments matches every nuance of the real article. Each piano instrument has been multi sampled in a vast amount of velocity levels. That's one reason why they all sound and feel so authentic.

The Piano section also includes the ability to use samples from the Nord Sample Library, like e.g. the Mellotron sounds that have been licensed by Clavia.

Clavinet sound

On an original Clavinet D6 you can select different pick-up and filter combinations by pressing a number of rocker switches. This functionality is very faithfully simulated in the Nord Electro 3, which means that you get all the possible original Clavinet D6 sound variations (plus an additional four) by selecting different pick-up and filter combinations. Here's how it works:

Pick-up type

A Clavinet D6 has two separate pick-ups, one on the "neck" and one on the "bridge". By selecting either one pick-up or both in different combinations you can alter the character of the sound quite drastically. When the Clavinet is selected in the Nord Electro 3, you use the Model button in the Piano Select section to select one of the four pick-up variations:

Pick-up Type Description

Clav Model 1 (CA) Only the "neck" pick-up; a warmer, less bright sound.
Clav Model 2 (CB) Only the "bridge" pick-up; a bright sound.
Clav Model 3 (DA) Both pick-ups on and in phase; a very full sound.
Clav Model 4 (DB) Both pick-ups 180 degrees out of phase; the fundamental is almost cancelled out and the sound becomes thin.

Clav EQ

The two Clav EQ buttons works as filter selectors. By selecting different combinations of the Brilliant/Treble and Medium/Soft filter indicators you can reproduce all 15 possible filter variations, exactly like on the original D6. Use the **Shift** button together with the **Clav EQ** button to access the **Med** and **Soft** settings.

Samp Env

When the Samp Lib type is active, the Samp Env LEDs and button can be used to set a desired velocity response and attack and release time behavior that affects the playback of the samples.

When none of the Attack LEDs are lit, the sample playback is not affected by any additional attack from the Electro 3 and it does not respond to keyboard velocity.
Slow At – select this when you want to play the samples with a slower attack.
Vel Dyn - select this when you want to control the volume and the timbre of the samples with velocity from the keyboard.
When both LEDs are lit, both the slow attack and the velocity option are active.

Press and hold the Shift button and operate the Samp Env button to set the desired release times.
When none of the Release LEDs are lit, the sample playback is not affected by any additional release.
Rel 1: Short release
Rel 2: Medium release
Rel 1&2: Long release

Piano Type

Use the Type selector to choose which piano sound you want to use. Each type may consist of several models; press repeatedly on the model selector to cycle through the models within a selected type.

Category	Description
Grand	Acoustic and electric grand pianos
Upright	Upright pianos
E Piano	Electric Pianos
Wurl / E Piano2	Wurlitzer (reed based) electric pianos
Clav/Hps	Clavinets and Harpsichords
Samp Lib	Samples

Mono

If you press **Shift** + **Mono** when a stereo instrument is selected, the stereo samples will be played back in mono instead.

Model

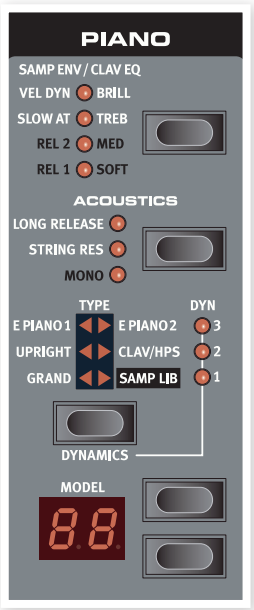
Press repeatedly on the **model** selector to cycle through the available models within a selected type.

ℹ *The type of a piano has been set by the lemmings at the Nord factory. You cannot move a piano from one type to another.*

Piano section

nord electro 3 HP only

The Piano Section on the Electro 3 HP has been expanded with additional features.



Acoustics

Activating the Long Release feature will add a slightly longer release to an acoustic or electric piano. This is equivalent to what happens when you adjust the damper tension in an acoustic or an electromechanical instrument.

ℹ *If a piano is selected that isn't compatible with the Long Release feature this feature will be disabled. Only pianos of version 5.2 or later are Release compatible.*

Turn String Resonance on when you want to include the pedal-down samples in an acoustic piano sound. These samples will then be used when you play and activate the sustain pedal, with a very rich sound.

ℹ *The Sml-sized pianos do not include the string resonance samples,*

Hold Shift and press the Acoustics button to playback a selected stereo piano in mono.

Dynamics

Hold Shift and press the Type button, to select the dynamics response. This allows you to use different response curves, which makes the Nord Electro 3 HP react stronger to the velocity you use on the keyboard. These response curves are only active when you use the piano sounds.

When all LEDs are off, the default response curve is active. A Dyn setting of 1 makes it a bit easier to reach the maximum, a setting of 2, even easier and the third setting is the lightest response curve.

Program section

The Program section is where you select the program, where the Store functions are activated and where you enter the system, MIDI and sound menus.

Up/Down buttons

The Up/Down buttons to the left of the display have several functions in the Nord Electro 3. Press repeatedly to select one of the 128 programs; the number and sub-letter of the program will be presented in the display. Press Shift together with Up/Down to scroll through every location (1A, 1B, 2A etc).

If you have activated any of the three menus, the System, MIDI or Sound menu, these buttons are then used to select a function, and together with the Shift button to change the value of a selected function. Read more about the menus on page 18.

Display

The LED display will show the active program number. If you edit a program, a dot will appear next to the program number, at the bottom right of the display.

If you have activated any of the three menus, the System, MIDI or Sound menu, the setting for each menu item is shown with the LEDs.

Store/Store Org. Preset

The red **Store** button is used when storing Programs and Organ Presets.

1. Press the Store button once and the current program number will start to flash.
2. Select the desired location with the Up/Down buttons and press Store again to confirm your intentions and to store the current settings to the selected location.
3. Press any button to abort the store procedure.
4. Press Shift + Store.

The display will flash O. pr.

5. Select a desired location to store by pressing one of the Organ Preset buttons.

The display will show the selected preset number.

6. Confirm your intentions by pressing Store once more.

This procedure may be aborted by pressing the Shift button.

ℹ *In order to be able to store settings the Memory Protection must be turned off. Read more about this on "Memory Protect – On, Off" on page 18.*

Prog A - Prog B

After you have selected a program number, you can quickly switch between program number A and B by using the Prog A and Prog B buttons.

Live

If you press the **Live** button, all changes to panel settings you make will be continuously saved in the "Live Buffer". If you switch the power off, or select another program, the settings are still stored in the Live memory, so when you power up next time (or return to the Live memory) all settings will be exactly as you left them.

If the Live memory is selected and you decide you wish to store the settings permanently as a program you can do so using the standard methods (see above). You can also store programs into the Live memory location, in which case the program settings will replace the current Live memory settings.

Instrument selectors

Press one of the Instrument Selectors to play either the organ or the piano/sample sounds.

Only the active section will have its corresponding functions lit and active. It is however possible to e.g. play with the pianos, and adjust the organ settings, and then quickly activate these by pressing the organ instrument selector.

Shift

Many buttons have a second function, printed in darker text just below the button or knob. You access these additional functions and parameters by holding **Shift** while pressing a button.

Octave Shift

The two Octave Shift buttons can be used to transpose the keyboard two octaves up or down (if the selected instrument supports this). Two Octave Shift LEDs that are lit at the right or left position indicates +/- 2 octaves shift.

Each instrument in Nord Electro 3 has a finite note range:

- The Organ extends one octave below and one octave above an 88 note keyboard range.
- The Piano and Samples extends one octave below an 88 key range, but not above.

Program section

nord electro 3 HP only

The 128 programs in the Electro 3 HP are organized in 32 banks with 4 programs each.

Change the bank by pressing the Up/ Down buttons to the left of the LED.

The programs in the banks are accessed with the 4 programs buttons.

Live Mode

In addition to the program memories, there are 4 Live locations in the Electro 3 HP that automatically saves the changes you make to the settings.

The 4 Program Buttons are used to access the Live locations when the LIve LED is lit.

Effects

The Effects section of Nord Electro 3 can be used for processing the Organ and Piano/Sample sounds. It's fully programmable and you can configure your effects separately for each program.

You have the possibility in every program, to store the on or off setting of the effects, also for the instrument not being used as the active in the program. This allows you to quickly change from e.g. a piano performance with some effects turned on, to an organ performance with another set of effects turned on, by just pressing the appropriate instrument selector.

Press and hold Shift and press the Effect selector to cycle through the effects in a counter clockwise fashion.

EQ

This is a 3-band EQ with treble, bass and a sweepable midrange. The frequency ranges can be boosted/attenuated with +/- 15 dB.

Effect 1

Effect 1 offers four different types of effects: **Tremolo**, **Auto-Panning**, 2 types of **Wah-Wah** and a ring modulator (**RM**).

The tremolo and the auto-panning have 3 selectable depths. Pan1 is less dramatic than Pan2, and Pan 3 (both Pan LEDs lit) is the most dramatic.

The Rate knob control the rate of the effect.

The **A-Wa** is a wah-effect where a lowpass filter sweep across the frequency range is controlled by the volume of the signal. This means that you can use the velocity on the keyboard to control the amount of "Quack!" in the sound. The Rate knob sets the frequency range of the sweep.

The **P-Wa** uses the Rate knob to control a lowpass filter sweep across the frequency range. If a control pedal is connected, this sweep is instead controlled by the pedal action, and the Rate knob will then have no effect.

Ring Modulation (RM) is a an effect that multiplies two signals with each other. In the Electro 3, these are the instrument audio signal and a modulation sine wave. The results can be range from a subtle coloring to screaming, inharmonic, bell type sounds. The Rate knob controls the frequency of the sine wave, also perceived as a "modulation rate".

A connected control pedal will control the amount of the ring modulation. If no control pedal is connected, the amount defaults a medium setting and the Rate knob can be used to produce a manually controlled ring modulation effect.

Effect 2

Effect 2 offers three types of modulation effects: **Phaser**, **Flanger** and **Chorus**.

Each of these effects has 3 selectable depths in the same fashion as the tremolo and pan in the Effects 1 section. The Rate knob control the rate of the effect.

Speaker/Comp

This section contains the speaker/amp emulations, the rotary speaker emulation and a compressor.

Small, **JC** and **Twin** emulates three different kinds of amplifier and speaker cabinets. The amount of drive is controlled by the Speaker/ Comp knob .

Rotary simulates a rotary speaker including its built-in amplifier. The knob sets the amount of overdrive of the rotary amplifier; the speed of the rotating speaker is set with the rotary speed controls on the left side of the panel.

Comp is a compressor that will even out the dynamics of what you play, making low level sounds louder and high level sounds lower in volume. This produces a tight, punchy sound and makes the overall level easier to control in a live mix situation. When this effect is active, the Drive/Comp knob controls the amount of compression applied.

Reverb

The Reverb section simulates the natural sound reflections in various acoustic environments. You can choose between five reverb types with various lengths and densities, indicated by the three LEDs that light up one or two at a time. The Dry/Wet knob sets the balance between the unprocessed and the processed signal.

Delay / Reverb

nord electro 3 HP only

The Delay effect produces echo effects. The Delay time is set with the Up/Down buttons (20 – 750 ms) while you hold the Tempo Tap/Set button.

The Dry/Wet knob adjusts the balance between the dry signal and the delay repeats.

Feedback

Press the Delay/Reverb button repeatedly to set the feedback, the number of delay repeats. There are 5 feedback settings, indicated by the Dly 1-3 array of LEDs

Ping Pong

Holding Shift and press the Tempo Tap button to light up the Ping Pong indicator, will make the delay repeats alternate between the left and right channels. If short delay times are used, these repeats will be “asymmetrical” and produce delays that are more like early reflections in reverb units.

Tempo Tap

You can use Tap Tempo to set a delay time matching the tempo of a song. Simply tap the Tap Tempo button in the tempo you wish the delay to sync to a number of times, and the delay time will be adjusted automatically. As long as the Tap Tempo LED is lit, the tempo is calculated - wait until it goes dark to tap in another tempo. A numerical indication of the delay time will be briefly shown in the LED.

Gain

This is the programmable Gain control which allows you to adjust the output level of each of the individual programs.

6 The Menus

Any settings that you change in the **System**, **MIDI** or **Sound** menu will take immediate effect on a global basis, and will be stored until you change them the next time. Enter the menus by pressing and holding Shift and the System, MIDI or Sound button (Prog A, Prog B or Live). Select a function with the Up/Down buttons and change the setting by pressing and holding Shift and the Up or Down button. Exit the menus by pressing a second time on the Prog A, B or Live button.

ℹ *The only exception to this is the MIDI Local On/Off setting which always reverts to Local On every time the Electro 3 is powered up.*

System Menu

Memory Protect – On, Off

This is set to "On" when the Nord Electro 3 leaves the factory, meaning that you cannot save any changes to the programs. Set this to Off when you wish to store your own programs. The System, MIDI or Sound menu settings and the Live memory are not protected by this setting.

Range: On (default), off

Output Routing

If you want to process your sound using external effects or separate amplifier systems, it can be convenient to route organ and piano sounds to separate outputs of the Nord Electro 3.

Range: St - Stereo Output. All instruments use the left and right outputs (default setting).

SO - Separated Output. All organs are routed to left output, pianos/samples are routed to the right output.

SP - Split Output. Tonewheel organ is routed to the left output. Vx and Farf organs and pianos/samples are routed to right output.

Transpose

Transpose allows you transpose the pitch of the Electro 3 up or down in semitone steps.

Range: -/+ 6 semitones (default = 0).

Fine Tune

This allows you to fine tune the pitch of the Nord Electro 3.

Range: +/- 50 cent (default = 0).

Sustain Pedal Polarity

This allows you to change the polarity of a connected sustain pedal, in case the functionality of your pedal is reversed (i.e. when the pedal is up, sustain is on and vice versa).

Range: CL - Close (default), OP - Open.

Sustain Pedal Configuration

If you're using a single sustain pedal connected to the Sustain Pedal input you may want to use it for sustain with piano sounds and as a Rotor Speed switch with organ sounds. In this case, select "rt" (rotor toggle) with the Up/Down buttons.

If you're using two separate sustain pedals: one in the Sustain Pedal Input and one in the Rotor Speed Input you probably want to use the sustain pedal in the Sustain Pedal input for sustain also when using Organ sounds. In this case, select 'SU' (sustain).

Range: SU (default), rt.

Rotor Pedal Polarity

This allows you to change the polarity of a sustain type pedal connected to control Rotor Speed, in case the functionality of your pedal is reversed (i.e. when the pedal is up, Rotor Speed is fast and vice versa).

Range: CL - Close (default), OP - Open.

Rotor Pedal Mode

If you are using a sustain pedal connected to control Rotor Speed this allows you to set how this should operate. "Hold" means that the Rotor Speed is fast for as long as the pedal is down and reverts back to slow when the pedal is released (or vice versa depending on the set pedal polarity).

"Toggle" means that the fast/slow rotor speed is switched each time you activate the pedal, like an on/off switch pedal.

Range: Hd - Hold, (default), tO - Toggle.

Ctrl Pedal Type

Different makes of control pedals have different specifications (resistance, offset and linearity). To simplify setup and to optimize the response of the pedal for the Nord Electro 3, the most common pedal makes are preconfigured, and you simply select the type of pedal you connect.

Roland, Yamaha and Fatar are linear control pedals with different scaling and offset. Ernie Ball pedals ("ErnieB") are marketed as volume pedals, with a logarithmic response, but the response is rescaled internally in the Nord Electro 3 to make them work nicely as control pedals. They may need a Y-cable (stereo plug -> 2 mono plugs) to work with the Nord Electro 3.

Range: FA - Fatar, Er - Ernie Ball, YA - Yamaha, rO - Roland (default)

Ctrl Pedal Type

nord electro 3 HP only

The Electro 3 HP has a slightly changed interface for the Ctrl Pedal input where some of the most common pedals are supported.

Range: P1 (Roland EV-5, default) , P1 (Roland EV-7), P3 (Yamaha FC-7), P4 (Korg EXP-2 & XVP-10), P5 (Fatar & Studiologic VP/25)

Ctrl Pedal Mode

A connected control pedal can be used to control several things. It can be used as a solitary organ swell pedal (swell is a combination of volume and frequency control), as a combined organ swell/volume pedal for the samples type, and finally as a swell/volume pedal for all the instrument sections (incl. the pianos) in the Nord Electro 3.

Range: O – Organ swell (default), S – Organ swell/sample volume, P - Organ swell/sample volume, piano volume

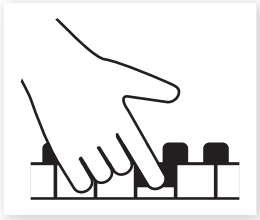
ℹ *A connected control pedal will always be active if the P-Wa or the RM effect is activated, regardless of the Ctrl Pedal Mode setting.*

Organ Trig Mode

This allows you to change how the Nord C2 keyboard triggers the organ sounds. When “Fast/High” is selected, you will trigger the organ sounds before the key reaches the end of its travel. This mode closely mimics the way a vintage tonewheel organ or a pipe organ trigger its notes.

Range: F - Fast (default), n - normal

High trigger point



Low trigger point

Drawbar Speed

This sets the speed with which the drawbars will increase or decrease the values when the drawbar buttons are held down.

Range: F- Fast (default), S- slow

MIDI Menu

MIDI Channel

This sets the MIDI Channel that the Nord Electro 3 transmits and responds to.

Range: 1-16, OF - off (default = 1)

Lower Channel

This sets the MIDI channel that the Lower Manual of the Nord Electro 3 organ section responds to when the organ split and the MIDI split modes are active.

Range: 1-16, OF - off (default = 2)

Local Control

This allows you to set if the Nord Electro 3 keyboard and front panel controls should control internal Programs or only send note and controller messages via MIDI. Local On is the normal “mode”. In Local Off mode, the front panel and keyboard action are transmitted via MIDI only and does not control the internal sound(s) directly.

Range: On (default), Off

ℹ *Local defaults back to mode On every time the Nord Electro 3 is powered on.*

Control Change (CC) Mode

This setting specifies how the front panel’s knobs and buttons are handled in the MIDI communication with MIDI Control Change messages. You can select if the panel controls and functions should either send or receive, or both or if Control Change messages should be ignored.

Range: Sr (send & receive - default), r (receive only), S (send only), Off

Program Change Mode

Specifies how the Nord Electro 3 should handle MIDI Program Change messages.

Range: Sr (send & receive - default), r (receive only), S (send only), Off

MIDI Split Mode

If MIDI Split mode is On and the Organ is set to a split operation, the lower manual will be exclusively controlled via incoming MIDI information to the Electro 3’s MIDI input. If you connect an external MIDI keyboard, the Electro 3 can then be used in a dual manual fashion.

Range: On, Off (default)

Send CC

You can perform a dump of all the active Program’s parameters as MIDI Control Change messages. Press the Store button to perform the dump.

Dump One

This allows you to perform a MIDI SysEx dump of the currently selected Program. Press the Store button to perform the dump.

Dump All

This allows you to perform a MIDI SysEx dump of all the Programs in the Electro 3. Press the Store button to perform the dump.

In the MIDI chapter, on “Receive MIDI SysEx dumps” on page 25 is a description on how the Electro 3 receives a Sys Ex dump.

Sound Menu

Treble Horn Speed

Sets the speed setting (in the fast and slow speed modes) of the rotary speaker simulation's treble horn.

Range: H - High, n - Normal (default), L - Low

Treble Horn Acceleration

Sets the acceleration and retardation time of the rotary speaker simulation's treble horn.

Range: H - High, n - Normal (default), L - Low

Bass Rotor Speed

Sets the speed setting (in the fast and slow speed modes) of the rotary speaker simulation's bass rotor.

Range: H - High, n - Normal (default), L - Low

Bass Rotor Acceleration

Sets the acceleration and retardation time of the rotary speaker simulation's bass rotor.

Range: H - High, n - Normal (default), L – Low

Perc. Fast Decay

Sets the fast mode decay time of the Tonewheel percussion effect.

Range: L - Long, n - Normal (default), S- Short

Perc. Slow Decay

Sets the slow mode decay time of the Tonewheel percussion effect.

Range: L - Long, n - Normal (default), S- Short

Perc. Norm Level

Sets the level of the percussion effect in its normal setting.

Range: H - High, n - Normal (default), L – Low

Perc. Soft Level

Sets the level of the percussion effect in its soft setting.

Range: H - High, n - Normal (default), L – Low

Tonewheel Mode

Sets the level of tonewheel crosstalk and cable leakage artifacts of the B3 organ model.

Range: u3 – Vintage 3, u2 - Vintage2, u1 - Vintage1 (default), Cl – Clean

Perc Drawbar 9 Cancel

If this is set to cancel, the 9th drawbar will be muted when the percussion is activated, to mimic the behavior of an original organ.

Range: C – Cancel, n – Normal (default).

Key Click Level

This sets the amount of Key Click for B3 organ model.

Range: High, Normal (default), Low

7 Nord Sound Manager

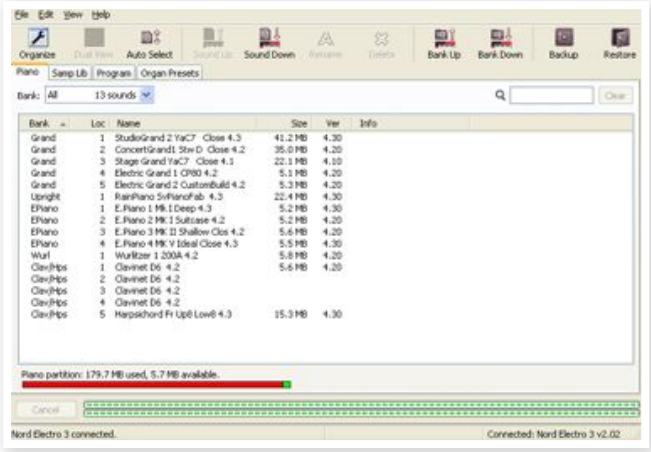
The Nord Sound Manager is the application that allows you to organize the various memory areas, the partitions in the Nord Electro 3. It is also used to download pianos, samples or programs to the Nord Electro 3 or to upload any of these items - called sounds - from the Nord Electro 3 memory to the computer hard drive. The Nord Sound Manager provides access to various methods to download the sounds to the unit and a function to backup and restore the entire Nord Electro 3 memory.

System requirements

The Nord Sound Manager is compatible with computers running Mac OSX 10.4 or later, Windows XP and Windows Vista. If you run the Manager on a Windows computer, you also need a Clavia USB Driver of version 2.14 or later installed. The Nord Electro 3 OS has to be v2.0 or later.

ℹ *Nord Electro 3 OS Updates, USB drivers and instructions on how to install these are available at the www.nordkeyboards.com website and on the DVD that accompanies this unit.*

Overview



You can work with the contents of the Piano, Sample, Organ Presets and the Program partitions. These are accessed from the tabs, conveniently labeled, Piano, Samp Lib, Program and Organ Presets.

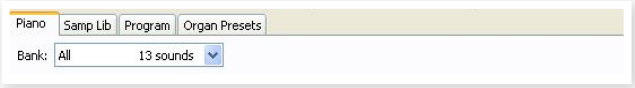
If no Nord Electro 3 is connected to the computer, pages, icons and memory locations will be grayed out.

⚠ *The actions that take place in the Nord Sound Manager will affect the memories in the Nord Electro 3. The Manager is on-line with a connected Electro 3 at all times; any changes that you perform in the Manager will immediately be executed in the Nord Electro 3. If you e.g. delete a piano, sample or a Program from the list in the Nord Sound Manager, that same sound will also be deleted from the Nord Electro 3 Flash memory.*

The Toolbar

The Toolbar gives you direct access to some of the more frequently used functions in the Nord Sound Manager. Clicking on an icon will activate one of these functions, and a dialogue will often appear asking for confirmation or further instructions from you.

The Tabs



Select the partition that you wish to work in with the Tabs. The Piano tab allows you to change the content of the piano partition, the Samp Lib tab is the sample partition and the Program tab allows you to organize the programs etc. The individual pianos, samples, programs or organ presets will be referred to as “sounds” in this manual and in the application itself.

☼ *Press Ctrl+Tab on the computer keyboard to cycle between the tabs.*

The lists can be ordered according to location, name, size, version and date, in ascending and descending order. Just click on a headline to select a preferred view.

Partition Memory Indicator

The memory indicator at the bottom of the window indicates how much memory is being used in the selected partition. The red area shows the used memory, green indicates space that is available for new sounds..

File Formats

The Nord Sound Manager creates and/or uses files with the Electro 3, with the following extensions:

- .npno - These are the piano files from the Nord Piano library.
- .nsmp - These are the sample files from the Nord Sample library.
- .nepg - These are the Program files.
- .neop - These are the Organ Preset files.
- .neb - This is the extension used for the Nord Electro 3 backup files.

ℹ *The Nord Electro 3HP is compatible with the v5.x or later version of the Nord Piano Library sounds. Earlier .npno versions are not supported by this unit.*

Just as any other computer file on your hard drive, these files may be renamed, emailed, copied, moved, lost or even stored in a safe location if an evil computer crash suddenly decides to take your hard drive for ride.

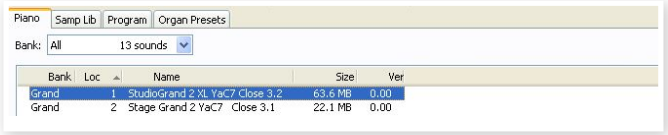
The Quick Tour

Let's get acquainted with some of the functions in the Nord Sound Manager.

Transfer pianos to the Electro

When the Nord Electro 3 leaves the factory, the Piano partition is filled with sounds. In order to be able to download additional pianos, you may have to delete some of the factory samples. If you ever want to reload any deleted pianos, they are available on the DVD that was included with the Nord Electro 3, or available as a download from the www.nordkeyboards.com web site, in the Libraries area.

Deleting a piano

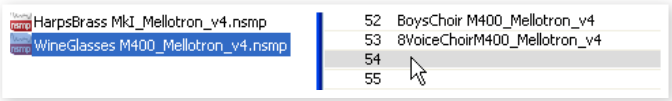

Piano
Samp Lib
Program
Organ Presets
Bank: All 13 sounds
Bank Loc Name Size Ver
Grand 1 StudioGrand 2 XL YaC7 Close 3.2 63.6 MB 0.00
Grand 2 Stage Grand 2 YaC7 Close 3.1 22.1 MB 0.00

1. Connect the Nord Electro 3 to the computer and launch the Nord Sound Manager.
2. The Piano tab will open and the current content of the sample partition in the Electro 3 will be displayed.
3. Select a piano to delete and press the Delete icon in the toolbar.

You can also right-click on the sound and choose the Delete option or use the backspace or delete keys on the computer keyboard.

4. You will be asked to confirm your intentions and then the piano in the Electro 3 will be deleted.

Download a new sound



1. **Using drag and drop**: Open the folder on the computer hard drive where the new sound is located.
2. Make sure that the Sound Manager window and the folder are visible on the screen.
3. Drag the new sound to the white area in the Sound Manager sample list. When the destination location will turn gray, release the mouse button.
4. The Clean Deleted Space process will start to prepare the memory and then the new piano will be downloaded to the Electro 3. If there isn't enough free space, a message will appear in the lower left text area in the Nord Sound Manager.

💡 *If the Organize option is active in the View menu, you can drop a sound on any free location in the bank. If this function is not active, the new sound will be automatically placed at the first free location in the bank. The various locations are selected using the Type selector on the Nord Electro 3.*

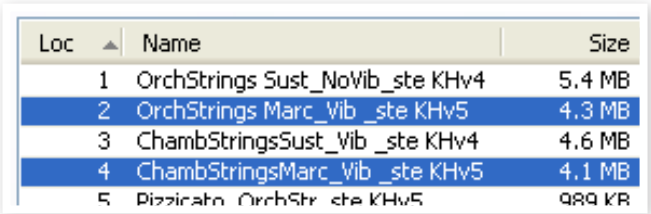
ℹ *The pianos are categorized and can only be added to the correct bank; electric pianos can not be added to the grand bank, the grand's cannot be dropped in the clavinet bank etc.***Using the Toolbar or Menu command**: Click on the Sound Down icon in the toolbar. The same command is also available in the File menu: Sound Download (Ctrl-D).

5. Browse to the folder on the hard drive where the desired sound is located, select it and click Open. The sample will now be added to its bank.

💡 *These methods can also be used with any sample, organ preset or individual program that you wish to add.*

Upload sounds from the Electro 3

1. Select the desired partition that holds the sounds that you wish to store on the computer hard drive.
2. Select the bank and the sound. Shift-click will allow you to select several consecutive sounds; Ctrl-click will allow you to select nonconsecutive sounds. Here we have selected a few of the samples:


Loc Name Size
1 OrchStrings Sust_NoVib_ste KHv4 5.4 MB
2 OrchStrings Marc_Vib _ste KHv5 4.3 MB
3 ChambStringsSust_Vib _ste KHv4 4.6 MB
4 ChambStringsMarc_Vib _ste KHv5 4.1 MB
5 Pizzicato OrchStr ste KHv5 989 KB

3. Click on the Sound Up tool or right-click on the selected sound(s) and select Upload. The dialogue will prompt you to browse to the desired destination folder on the hard drive. The upload process may take a few moments depending on the size of the sounds.

Upload a complete partition to the hard drive

1. Make sure that the desired partition (and bank) is focused in the Nord Sound Manager. You will also have the opportunity to change the source bank in an upcoming dialogue.

2. Click on the Bank Up tool, or select the File/Bank Upload menu command (Ctrl-Shift-U). Verify that the source bank is correct and browse to the desired destination folder on the computer hard drive.

You can also select All at the bottom of the sample bank list drop down. This will upload the entire content of the partition to the computer hard drive.

If the Create Subfolders option is checked, a folder structure - partition/bank/sounds - will automatically be created in the destination folder.

Download sounds to the Electro 3

1. Click on the Bank Down tool, or select the File/Bank Download menu command (Ctrl-Shift-D).

2. Verify that the destination bank is correct and browse to the desired source folder on the computer hard drive.

ℹ *When you click on Download a dialogue appears to inform you that the content of the destination bank in the Nord Electro 3 will be replaced with that of the source file.*

If you select All in the destination bank drop down, you can replace all the sounds in a partition with those on a folder structure on the hard drive. If Search Subfolders is active, you can browse to the top folder of a structure as the parent of the source files.

Organize the program partition

By using drag and drop, you can organize the content of the Program partition with its 128 programs.

1. Make sure that Organize is activated in the View menu.

2. Select and drag a program from the destination location to the desired location.

If you drop a sound on a free location, the sound will be moved from the source location. If you drop on a location that is occupied, the two sounds will trade places.

3. Select a program and press the Ctrl-key on the computer keyboard. If you now drag this selection, the Program will be copied and pasted at the destination instead of just being moved.

Search Box

1. By entering one or several characters in the Search Box, you can filter out the content that is presented in the lists.

This provides you with a quick way to find duplicate programs, all programs made by the mysterious AD (Ake Danielsson) or all programs with e.g. the phrase “string” in their names.

This concludes the tour of the Nord Sound Manager. A complete User Manual is included on the DVD or at the www.nordkeyboards.com website.

Updates and samples

Please visit our website at http://www.nordkeyboards.com to download any updates of the Nord Sound Manager and sounds that have been released for the Nord Electro 3. These items will be available as free downloads in the Nord Electro 3 download area.

Nord Sample Editor

The Nord Electro 3 can also be used together with the Nord Sample Editor. This application is used when you want to take your own audio files and assemble these to a Sample, a sample that can be loaded to the Electro 3’s Samp Lib partition.

The Nord Sample Editor and instructions on how to use it can be found on the DVD and on the www.nordkeyboards.com website.

8 MIDI functions

About the MIDI implementation

The following MIDI messages can be transmitted and received from the Nord Electro 3:

Note On/Off

- Note On and Note Off messages are transmitted and received.

Controllers

In the MIDI Menu (see page 19), you can select if the Nord Electro 3 should transmit and/or receive Control Change messages.

- Incoming MIDI Controller 7 controls the overall volume of the Electro 3.
- Incoming MIDI Controller 10 controls the panning of the Electro 3.
- If you have a control pedal connected to the control pedal input, this is transmitted as Controller 11 (Expression).
- If you have a pedal connected to the sustain pedal input, this is transmitted as Controller 64 (Sustain Pedal).
- If you have a pedal connected to the rotor pedal input, this pedal is transmitted as Controller 90.
- Almost all other controls (knobs and buttons) on the front panel are also transmitted (and received) as Control Change messages. This can be used to record your actions on the front panel into a MIDI sequencer. For a full list of which parameters correspond to the Controller numbers, see the MIDI implementation on the next page.

Keyboard velocity

The Nord Electro 3 can transmit and receive keyboard velocity messages. Organ sounds will always be played back at nominal level regardless of incoming MIDI Velocity data. Release velocity is also transmitted.

Program change

In the MIDI Menu (see page 19), you can select if the Nord Electro 3 should send and/or receive Program Change messages.

When you select a Program, a Program Change message is transmitted via MIDI. If a Program Change message is received on the selected MIDI Channel, the Nord Electro 3 will change Program accordingly.

The 128 Program locations send and respond to MIDI Program Change values 0-127.

MIDI Sysex (System Exclusive)

Individual Programs or all Programs can be transmitted and received as a System Exclusive dump.

Nord Electro 3 with a sequencer

Connections

(1) Connect the MIDI Out on the Nord Electro 3 to the MIDI In on your sequencer.

(2) Connect the MIDI Out from your sequencer to the MIDI In on the Nord Electro 3.

Local On/Off

Local Off may be used when you use a sequencer to record and play back from Nord Electro 3. If the sequencer echoes back incoming MIDI data, the Nord Electro 3 may respond twice to every note and other message/action if for example the keyboard and the sequencer sends the same MIDI information to the unit. Local On/Off is set on the “MIDI menu” see page 19.

MIDI Channel

The MIDI channel(s) that the Nord Electro 3 uses are set up in the MIDI menu - see “MIDI menu” on page 19. If you use the Organ model in the split/lower manual configuration, the lower manual can receive on a separate MIDI channel.

Program Change

Usually you select a Program Change value for a track in the sequencer track settings. The 128 program locations send and respond to Program Change values 0-127.

If you want to record a Program Change message, activate recording in the sequencer and simply select the program on the Nord Electro 3.

Controllers

When you record actions with knobs and buttons, make sure that the sequencer “echoes” the changes back on the correct MIDI Channel, or your changes won’t have any effect.

About controllers and “chasing”

Consider a situation where you record a Controller message, e.g. a Drawbar opening, in the middle of your sequencer song. Then you “rewind” the sequencer to a position before the recorded Drawbar opening. The problem is that the Nord Electro 3’s Drawbar will remain opened, although it really should be as it was before you recorded the opening.

To solve this, you could record a “snapshot” of all Controller settings of the Nord Electro 3 Program at the beginning of your sequencer song. See “Sending MIDI Controller dumps” below.

Program and Controller dumps

To dump a Program SysEx, or MIDI Controller data via MIDI, either to another Nord Electro 3 or for recording the data into another MIDI device, proceed as follows:

Sending program dumps

1. Connect the MIDI OUT on the Nord Electro 3 to the MIDI In on the receiving device.
2. Set up the receiving device to accept MIDI SysEx and MIDI Controller data.
3. Press Shift + MIDI and select the “Dump One” or “Dump All” menu item using the Up/Down buttons.
4. If needed, set the receiving MIDI device to “recording mode”.
5. Press the Store button to send the dump to the MIDI Out of Nord Electro 3. The display will stop flashing once the dump has been sent.

ℹ *For the programs that use the organ sounds, the complete settings for the sound will be dumped as MIDI SysEx but for programs using pianos or Samples, all parameters will be sent but NOT the actual instrument samples.*

Therefore, when dumping back a program that uses a piano sound, make sure the actual instrument samples are also available in the Nord Electro 3. Otherwise the parameters in the SysEx message will be applied to another available piano instrument.

Sending MIDI Controller dumps

1. Set up as in steps 1 and 2 in the preceding description.
2. Press Shift + MIDI and select the ‘Send CC” menu item using the Up/Down buttons.
3. Press the Store button to send the dump to the MIDI Out of Nord Electro 3. The Display will stop flashing once the dump has been sent.

Receive MIDI SysEx dumps

Here is how to receive a MIDI SysEx Dump:

1. Connect the MIDI Out on the transmitting device to the MIDI IN on the Nord Electro 3.
2. Initiate the transmission on the transmitting device.

If the dump contained all Programs (All), it will replace all programs currently stored in the Nord Electro 3. If the dump contained only a single program, it will be temporarily placed in the currently selected program memory location. A dot will appear to in the lower, right corner to indicate an unsaved edit. You will then have to store the program manually to a memory location using the Store function (see “Storing Programs” on page 15).

MIDI Controller list

The following is a list of the MIDI Controller numbers used for all knobs and buttons on the front panel:

Nord Electro parameter	MIDI CC
Drawbars - Preset 2/Upper	
Drawbar 1	16
Drawbar 2	17
Drawbar 3	18
Drawbar 4	19
Drawbar 5	20
Drawbar 6	21
Drawbar 7	22
Drawbar 8	23
Drawbar 9	24
Drawbars - Preset 1/Lower	
Drawbar 1	70
Drawbar 2	71
Drawbar 3	72
Drawbar 4	73
Drawbar 5	74
Drawbar 6	75
Drawbar 7	76
Drawbar 8	77
Drawbar 9	78
Organ Model Sel	9
Preset/Manual Sel	3
Perc Decay	88
Perc Level	89
Sustain Pedal	64
Control Pedal	11
Rotary Speed	82
Rotary Stop Mode	79
Vib Mode	84
Vib On/Off Preset 2/UP	85
Vib On/Off Preset 1/LOW (B3 model)	117
Perc On/Off	87
Perc Hard	95
Samp Attack Sel	33
Samp Release Sel	34
Clav EQ Brill On/Off	103
Clav EQ Treble On/Off	104
Clav EQ Medium On/Off	105
Clav EQ Soft On/Off	106
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Piano Type	12
Piano Model	44
Piano Mono	83
Piano Dynamics - Electro 3 HP only	99
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Oct Shift Organ Lower	28
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EQ Treble	113
EQ Mid	116
EQ Mid Freq	117
EQ Bass	114
Gain	7
Effect 1 Rate	63
Effect 1 Sel	60
Effect 1 On/Off	69
Effect 2 Rate	62
Effect 2 Sel	61
Effect 2 On/Off	80
Speaker/Comp Drive	111
Speaker/Comp Sel	81
Speaker/Comp On/Off	86
Reverb Wet/Dry	102
Reverb Sel	96
Reverb On/Off	97
Delay Rate - Electro 3 HP only	92
Delay Ping Pong - Electro 3 HP only	93
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MIDI Implementation Chart

Function		Transmitted	Recognized	Remarks
Basic Channel		1 - 16	1 - 16	
Default Channel		1 - 16	1 - 16	
Mode	Default	Mode 3	Mode 3	
	Message	X	X	
	Altered			
Note		0-127	0-127	
Number	True Voice			
Velocity	Note ON	O, v= 1 - 127	O, v= 1 - 127	
	Note Off	O, v= 1 - 127	O, v= 1 - 127	
After	Key's	X	X	
Touch	Channel	X	X	
Pitch Bender		X	X	
Control Change		O	O	
Program Change		O, 0-127	O, 0-127	
True#				
System Exclusive		O	O	
System	Song Pos	X	X	
Common	Song Sel	X	X	
	Tune	X	X	
System	Clock	X	X	
Realtime	Commands	X	X	
Aux	Local on/off	X	X	
Message	All notes off	X	X	
	Active Sense	X	X	
	Reset	X	X	
Number	True Voice			

Mode 1: Omni On, Poly - Mode 2: Omni O, Mono - Mode 3: Omni Off, Poly - Mode 4: Omni Off, Mono - O = Yes - X = No

Model: Nord Electro 3 OS v1.x Date: 2008-12-15

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